

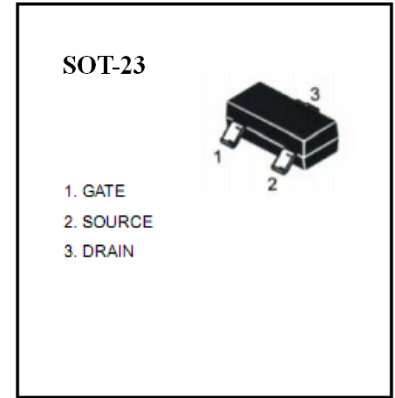
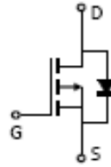
SOT-23 Plastic-Encapsulate Transistors

HX2301 MOSFET(P-Channel)

FEATURES

TrenchFET Power MOSFET

MARKING: A1SHB



MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{DS}	Drain-Source voltage	-20	V
V _{GS}	Gate-Source voltage	±12	V
I _D	Drain current	-2.8	A
P _D	Power Dissipation	1	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250uA	-20			V
Gate-Threshold Voltage	V _{th(GS)}	V _{DS} =V _{GS} , I _D =-250 uA	-0.4	-0.7	-1.2	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±12V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0V			-1	uA
Drain-Source On-Resistance	r _{DS(ON)}	V _{GS} =-4.5V, I _D =-2.8A		55	85	mΩ
		V _{GS} =-2.5V, I _D =-2A		60	110	mΩ
Forward Trans conductance	g _{fs}	V _{DS} =-5V, I _D =-5A		5		S
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =-10V, V _{GS} =0V, f=1MHz		560		pF
Output Capacitance	C _{oss}			61		
Reverse Transfer Capacitance	C _{rss}			55		
Switching Capacitance						
Turn-on Delay Time	t _{d(on)}	V _{DD} =-10V, I _D =-2.8A, V _{GS} =-4.5V R _{GEN} =-60ohm R _L =10ohm		11		nS
Turn-on Rise Time	t _r			6.6		nS
Turn-off Delay Time	t _{d(off)}			113		nS
Turn-off Fall Time	t _f			46		nS
Total Gate Charge	Q _g	V _{DS} =-10V, I _D =-3A, V _{GS} =-4.5V,		6.1		nC
Gate-Source Charge	Q _{gs}			1.7		nC
Gate-Drain Charge	Q _{gd}			1.3		nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _D =-1.3A			-1.2	V
Diode Forward Current	I _S				-1.3	A